REMARKS

In the Office Action mailed April 18, 2003, claims 1-24 were rejected. Applicants have thoroughly reviewed the outstanding Office Action including the Examiner's remarks and the references cited therein. The following remarks are believed to be fully responsive to the Office Action. All the pending claims at issue are believed to be distinct over the cited references.

Claims 1, 3, 9, 12, 13 and 16 are amended. No claims are added. No claims are cancelled. Accordingly, claims 1-24 remain pending.

Applicants respectfully request reconsideration in light of the following remarks.

CLAIM AMENDMENTS

Claims 1, 3, 9, 12, 13 and 16 have been amended to explicitly state that which was implicitly in the original claim language. As such, the claims have not been narrowed.

Claim 1 has been amended to include that which was implicitly in the originally presented claim. Applicants have included further description of the apparatus comprising a shaft. The amendment does not include new matter and support can be found on page 8, first and second paragraphs of the Detailed Description. Additional support can be found in FIG. 1 and FIG. 3.

Claim 1 has been further amended to describe the position of the angle indicator as it relates to the apparatus. The amendment does not include new matter and support can be found on page 13, first, second and third paragraphs. Additional support can be found in FIG. 5 and FIG. 6.

Claim 9 has been amended to include that which was implicitly in the originally presented claim. Applicants have included further description of the means for applying torque

to a fastener, which comprises a shaft. The amendment does not include new matter and support can be found on page 8, first and second paragraphs of the Detailed Description. Additional support can be found in FIG. 1 and FIG. 3.

Claim 9 has been further amended to describe the position of the angle indicator as it relates to the apparatus. The amendment does not include new matter and support can be found on page 13, first, second and third paragraphs. Additional support can be found in FIG. 5 and FIG. 6.

Claim 12 has been amended to include that which was implicitly in the originally presented claim. Applicants have included further description of tool in the step of measuring the angle of rotation. The amendment does not include new matter and support can be found on page 11, second paragraph. Additional support can be found in FIG. 3.

Claim 12 has been further amended to describe the position of the angle indicator as it relates to the apparatus. The amendment does not include new matter and support can be found on page 13, first, second and third paragraphs. Additional support can be found in FIG. 5 and FIG. 6.

Claim 13 has been amended to correct a typographical error. Applicants inadvertently included, without deceptive intent, the step of "displaying the current angle of rotation." This step is already included in claim 12.

Claim 16 has been amended to include that which was implicitly in the originally presented claim. Applicants have included further description of the apparatus such that it is configured to fit between the tool and the fastener. The amendment does not include new matter and support can be found on page 8, first and second paragraphs of the Detailed Description. Additional support can be found in FIG. 1 and FIG. 3.

Claim 16 has been further amended to describe the position of the angle indicator as it relates to the apparatus. The amendment does not include new matter and support can be found on page 13, first, second and third paragraphs. Additional support can be found in FIG. 5 and FIG. 6.

CLAIM REJECTIONS – 35 U.S.C. § 102(b)

The Examiner rejected claims 1-3 and 9-18 under 35 U.S.C. §102(b) as being unpatentable over United States Patent No. 5,581,042 to Tambini (hereinafter referred to as "Tambini"). In light of the following remarks, Applicants respectfully submit that these claims are allowable.

Initially, Applicants note that it is axiomatic that to qualify as an anticipation under Section 102, the cited reference must "bear within its four corners adequate directions for the practice of the patent invalidated." (See, for example, Dewey & Almay Chemical Co. v. Mimex Co., Inc., 52 U.S.P.Q. 138 (2nd Cir. 1942)). Applicants respectfully submit that Tambini embodies no such directions.

More particularly, independent claims 1,3, 9, 12, 13, 16 , as amended, of the present application claim either a tool or a shaft positioned between a ratchet and socket or directly connected to the fastener. The angle sensor, of the present invention, is linked to the rotation of the shaft to determine the angle of rotation. Upon determination of the angle, it is displayed by the angle indicator that is separated or positioned away from the tool or shaft.

The present invention, also, is able to set the zero-point at any time. It is not necessary for the device to be held in the snug torque position for a period of time in order for the zero-point to be set. As a matter of fact, the present invention is not necessarily needed during the initial

tightening of the fastener. In most instances, the present invention is used after the snug-torque is reached.

The cited reference, Tambini, discloses a device in which angle of torque is incorporated into the actual ratchet. The angle of rotation is displayed on the torque readout 17, which is incorporated on the handle portion of the device. As a result, the device is ill-suited for tight or hard to reach spaces. The ratchet and resulting electronics are not able to be fit into these locations. The present invention permits the technician to continue to use their existing ratchet and socket set and allows the angle indicator to be linked to the shaft, which is not located on the tool.

Furthermore, the method of setting the zero-point in Tambini is vastly different from that of the present invention. Quoting from Tambini at column 2 , lines 58-67 "the tightening is continued until the snug point is reached. This is indicated on the wrench and the operator must then stop and *hold the wrench as stationary* as possible on the joint at the applied snug torque until the delayed snug is indicated, as determined by the delay. At this point, the set reset Flip Flop 20, switches to isolate the velocity reference signal and maintain it at this particular level and the integrator 40 is activated so that any future changes in the velocity signals are integrated.

In other words, Tambini first requires the user to use the ratchet to conduct the initial tightening of the fastener. At the point the fastener is snug, the user holds the ratchet in a still position for a number of seconds. This non-movement is an indication to the device in Tambini that the reference point has been reached from where the angle is measured. From this point on, the ratchet and associated electronics calculate the angle of rotation.

The present invention permits the user to place the shaft or tool between the ratchet and socket. At this point, the user depresses a button which indicates the point of reference from

which any further angle of rotation is calculated. It is not necessary for the user of the present invention to use it to initially tighten the fastener or hold it in place for a set number of seconds to set the reference point.

The distinctions described, either singularly or in combination, are present in the independent claims. Therefore, the claims, as amended, are distinguishable over Tambini. In light of the foregoing, withdrawal of this rejection of claims 1-3 and 9-18 under 35 U.S.C. § 102(b) as being anticipated by Tambini is respectfully requested.

CLAIM REJECTIONS – 35 U.S.C. § 103(a)

The Examiner rejected claims 4, 5, 23 and 24 under 35 U.S.C. § 103(a) as being obvious over Tambini in view of United States Patent Application No. 2003/0040883 to Ermer *et al.* (hereinafter referred to as "Ermer").

The Examiner rejected claims 6 and 20 under 35 U.S.C. § 103(a) as being obvious over Tambini in view of United States Patent No. 5,095,746 to Stanis (hereinafter referred to as "Stanis").

The Examiner rejected claims 7 and 21 under 35 U.S.C. § 103(a) as being obvious over Tambini in view of Stanis and United States Patent No. 4,308,779 to Suzuki *et al* (hereinafter referred to as "Suzuki").

The Examiner rejected claims 8 and 22 under 35 U.S.C. § 103(a) as being obvious over Tambini in view of United States Patent No. 5,571,971 to Chastel *et al.* (hereinafter referred to as "Chastel").

The Examiner rejected claim 19 under 35 U.S.C. § 103(a) as being obvious over Tambini in view of United States Patent No. 6,345,436 to Codrington (hereinafter referred to as "Codrington").

The Examiner bears the initial burden of factually supporting any prima facie conclusion of obviousness. *MPEP §2142.* To establish a prima facie case of obviousness, three criteria must be met. First, there must be some suggestion or motivation, to modify the references or to combine reference teachings. Second, there must be reasonable expectation of success. Finally, the prior art must teach all the claim limitations. *MPEP §2142.* In light of the argument regarding the Tambini reference, the combined references do not teach or suggest all the claim limitations of the present application. As a result, the obviousness rejection is improper because the independent claim is allowable, therefore, all claims which depend from them are allowable. Applicants respectfully request that the rejection be removed.

CONCLUSION

In light of the above remarks, Applicants respectfully submit that all pending claims 1-24, as currently presented, are in condition for allowance. If, for any reason, the Examiner disagrees, please call the undersigned attorney at 202-861-1703 in an effort to resolve any matter still outstanding before issuing another action. The undersigned attorney is confident that any issue, which might remain, can readily be worked out by telephone.

In the event this paper is not timely filed, Applicant petitions for an appropriate extension of time. Please charge any fee deficiencies or credit any overpayments to Deposit Account No. 50-2036 referencing attorney docket number 87355.3000.

Respectfully submitted,

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Date: May 14, 2003

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APPENDIX

VERSION WITH MARKINGS SHOWING CHANGES MADE

IN THE CLAIMS

Amend claims 1, 3, 9, 12, 13 and 16

1. (Amended) A system for measuring an angle of rotation, comprising:

an apparatus that measures the angle of rotation applied to a fastener by a tool beyond a specific reference point, the apparatus comprising a shaft; and

an angle indicator located away from and linked to the apparatus.

3. (Amended) The apparatus of claim 2, wherein the zero point is [based on torque] a reference point for the processor to calculate a selected angle.

9. (Amended) A device for measuring an angle of rotation beyond a specific reference point, comprising:

means for applying torque to a fastener, the means for applying comprising a shaft;

means for measuring the [an] angle of rotation of the fastener from a fixed reference point; and

means for displaying the current angle of rotation, the means for displaying located away from and linked to the means for applying.

12. (Amended) A method for determining an angle of rotation of a fastener, the steps of:

measuring the angle of rotation as applied to the fastener by a tool; and

displaying the current angle of rotation with an angle indicator positioned away from and linked to the tool.

13. (Amended) The method of claim 12 wherein the step of measuring the angle of rotation comprises:

selecting a desired angle using an angle selector located on an apparatus comprising an angle selector, an angle rate sensor, a processor, a zero point indicator and an angle indicator;

indicating a zero point to the processor;

applying torque to the fastener with the tool to which the apparatus is attached to rotate the fastener;

measuring the rate and speed of the rotation with the angle rate sensor starting from the zero point; and

calculating an angle of rotation using the processor[; and

displaying the current angle of rotation].

16. (Amended) A system for measuring an angle of rotation at a fastener beyond a specific reference point, comprising:

a tool that applies torque to a fastener [to rotate the fastener];

an apparatus that measures the angle of rotation beyond a specific reference point, the apparatus configured to fit between the tool and the fastener; and

an angle indicator located away from and linked to the apparatus [that indicates the current angle of rotation].